

EXHIBIT R-2, RDT&E Budget Item Justification							DATE: February 2004	
APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-5					R-1 ITEM NOMENCLATURE 0604214N / AV-8B Aircraft			
COST (\$ in Millions)		FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Total PE Cost		17.712	8.630	12.284	15.119	11.209	10.375	10.816
H0652 AV-8B		14.733	8.630	12.284	15.119	11.209	10.375	10.816
H2634 AV-8B (OSCAR)		2.979						
A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: (U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: (H0652) The program provides AV-8B Design, Development, Integration and Test of the following improvements: The Engine Life Management Program (ELMP), Harrier 2.0 (H20), Escape System, Joint Mission Planning System (JMPS), Tactical Aircraft Moving Map Capability (TAMMAC) and Aircraft Handling . The ELMP is a comprehensive plan to increase safety of flight and operational readiness of the AV-8B F402-RR-408 Engine. PMA-257 will accomplish this mission by conducting Engineering Project Description (EPD) investigations and performing a series of planned Accelerated Simulated Mission Tests (ASMET) to derive engineering improvements to the engine. H20 corrects deficiencies & adds enhancements to the Open System Core Avionics Requirement software (OC1.2). Litening Pilot Vehicle Interface (PVI) (funded separately with APN-5, OSIP 23-00) will be integrated simultaneously with H20. The Escape System qualifies an improved ejection seat to reduce the risk of injury to aircrew. The JMPS is required as part of the DON directed migration to a common Navy and Marine Corps mission planning system. The TAMMAC is the avionics system that will replace the aging/obsolete AN/ASQ-196 digital map set and the AN/ASQ-194 data storage set presently installed. A/C Handling and performance is all engineering activities for development and design to support aircraft safety flight clearance and concept exploration to support POM objectives. (U) (H2634) The program provides AV-8B Integration and Test of the following improvements, including: Open System Core Avionics Requirement (OSCAR), Joint Direct Attack Munition (JDAM), HAVEQUICK SINGARS, and Advanced Mission Computer (AMC). OSCAR is a form-fit-function replacement of the existing AV-8B mission and stores management computers that would capitalize on commercial-off-the-shelf hardware components and modular high order software language which will provide the necessary computer memory and throughput to integrate current modifications such as JDAM and HAVEQUICK/SINGARS. On 7 Oct 96 ASN (RD&A) directed the Program Manager to proceed immediately with the OSCAR initiative. On 4 Sep 98, Special Assistant to ASN(RDA) approved OSCAR program restructuring with capitalization on the Advanced Mission Computer (AMC). The title of the Operational Flight Program (OFP) software development effort which integrates the JDAM and HAVEQUICK/SINGARS into the AV-8B was changed from C2.0 to OC 1.2 to reflect the change of effort in accordance with the ASN (RDA) approved AV-8B OSCAR initiative. OSCAR completed first flight 29 May 1998. OSCAR successfully completed Iteration 4 and 5 flight testing and commenced Iteration 6 in first quarter FY01 for OC1.1. LRIP approval 2nd quarter of FY2002. Completed developmental testing of OC1.2 fourth quarter FY2002. OTRR approval fourth quarter FY02. OPEVAL commenced 4th QTR FY02. Operational test was decertified 4th QTR FY02 to address software anomalies. Anomalies were corrected and OTRR recertification 1st QTR FY03. OPEVAL commenced 2nd QTR FY03. LRIP II approval received 3rd QTR FY03.								

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2004	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5		PROGRAM ELEMENT NUMBER AND NAME 0604214N / AV-8B AIRCRAFT			PROJECT NUMBER AND NAME H0652 / AV-8B			
COST (\$ in Millions)		FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost		14.733	8.630	12.284	15.119	11.209	10.375	10.816
RDT&E Articles Qty								

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

(H0652) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: (H0652) The program provides AV-8B Design, Development, Integration and Test of the following improvements: The Engine Life Management Program (ELMP), Harrier 2.0 (H20), Escape System, Joint Mission Planning System (JMPS), Tactical Aircraft Moving Map Capability (TAMMAC) and Aircraft Handling . The ELMP is a comprehensive plan to increase safety of flight and operational readiness of the AV-8B F402-RR-408 Engine. PMA-257 will accomplish this mission by conducting Engineering Project Description (EPD) investigations and performing a series of planned Accelerated Simulated Mission Tests (ASMET) to derive engineering improvements to the engine. H20 corrects deficiencies & adds enhancements to the Open System Core Avionics Requirement software (OC1.2). Litening Pilot Vehicle Interface (PVI) (funded separately with APN-5, OSIP 23-00) will be integrated simultaneously with H20. The Escape System qualifies an improved ejection seat to reduce the risk of injury to aircrew. The JMPS is required as part of the DON directed migration to a common Navy and Marine Corps mission planning system. The TAMMAC is the avionics system that will replace the aging/obsolete AN/ASQ-196 digital map set and the AN/ASQ-194 data storage set presently installed. A/C Handling and performance is all engineering activities for development and design to support aircraft safety flight clearance and concept exploration to support POM objectives.

UNCLASSIFIED

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: February 2004																
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604214N / AV-8B AIRCRAFT	PROJECT NUMBER AND NAME H0652 / AV-8B																	
B. Accomplishments/Planned Program																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;"></th><th style="width: 15%;">FY 03</th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th></tr></thead><tbody><tr><td>Aircraft Handling</td><td></td><td style="text-align: center;">2.879</td><td style="text-align: center;">0.782</td><td style="text-align: center;">0.651</td></tr><tr><td>RDT&E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;">Aircraft handling and performance investigations to improve safety and increase operational performance. Conduct study of AV-8B Obsolescence (Laser Maverick & other) issues & continue aircraft handling and performance investigations to improve safety and increase operational performance. Conduct testing and analysis of AV-8B obsolescence (Laser Maverick & other) issues and continue aircraft handling and performance investigations to improve safety and increase operational performance.</div>							FY 03	FY 04	FY 05	Aircraft Handling		2.879	0.782	0.651	RDT&E Articles Quantity				
		FY 03	FY 04	FY 05															
Aircraft Handling		2.879	0.782	0.651															
RDT&E Articles Quantity																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;"></th><th style="width: 15%;">FY 03</th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th></tr></thead><tbody><tr><td>Engine Life Management Plan (ELMP)</td><td></td><td style="text-align: center;">7.719</td><td style="text-align: center;">2.294</td><td style="text-align: center;">6.014</td></tr><tr><td>RDT&E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;">Testing, analysis and integration to improve safety of flight and operational readiness of the AV-8B Engine. Formalize engine design development efforts to be incorporated into the engine. Complete ASMET III testing of the AV-8B engine and formalize Engine design development efforts based off of ASMET III and incorporate into the engine.</div>							FY 03	FY 04	FY 05	Engine Life Management Plan (ELMP)		7.719	2.294	6.014	RDT&E Articles Quantity				
		FY 03	FY 04	FY 05															
Engine Life Management Plan (ELMP)		7.719	2.294	6.014															
RDT&E Articles Quantity																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;"></th><th style="width: 15%;">FY 03</th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th></tr></thead><tbody><tr><td>Joint Mission Planning System (JMPS)</td><td></td><td style="text-align: center;">2.723</td><td style="text-align: center;">0.000</td><td style="text-align: center;">0.000</td></tr><tr><td>RDT&E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;">Software design, development, and integration of the AV-8B JMPS.</div>							FY 03	FY 04	FY 05	Joint Mission Planning System (JMPS)		2.723	0.000	0.000	RDT&E Articles Quantity				
		FY 03	FY 04	FY 05															
Joint Mission Planning System (JMPS)		2.723	0.000	0.000															
RDT&E Articles Quantity																			

UNCLASSIFIED

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: February 2004																
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604214N / AV-8B AIRCRAFT	PROJECT NUMBER AND NAME H0652 / AV-8B																	
B. Accomplishments/Planned Program (Cont.)																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 10%;"></th><th style="width: 15%;">FY 03</th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th></tr></thead><tbody><tr><td>Harrier 2.0 (H20)</td><td></td><td style="text-align: center;">1.412</td><td style="text-align: center;">0.000</td><td style="text-align: center;">0.000</td></tr><tr><td>RDT&E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table>							FY 03	FY 04	FY 05	Harrier 2.0 (H20)		1.412	0.000	0.000	RDT&E Articles Quantity				
		FY 03	FY 04	FY 05															
Harrier 2.0 (H20)		1.412	0.000	0.000															
RDT&E Articles Quantity																			
<div>Conducted design and development, integration of the H20 flight software program, PDR, CDR, Development Test (DT) and Operational Testing (OT).</div>																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 10%;"></th><th style="width: 15%;">FY 03</th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th></tr></thead><tbody><tr><td>Tactical Aircraft Moving Map Capability (TAMMAC)</td><td></td><td style="text-align: center;">0.000</td><td style="text-align: center;">5.554</td><td style="text-align: center;">5.619</td></tr><tr><td>RDT&E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table>							FY 03	FY 04	FY 05	Tactical Aircraft Moving Map Capability (TAMMAC)		0.000	5.554	5.619	RDT&E Articles Quantity				
		FY 03	FY 04	FY 05															
Tactical Aircraft Moving Map Capability (TAMMAC)		0.000	5.554	5.619															
RDT&E Articles Quantity																			
<div>Program initiation and integration of Tactical Aircraft Moving Map Capability (TAMMAC) and PDR /CDR. Development Test (DT) and Operational Testing (OT) of Tactical Aircraft Moving Map Capability (TAMMAC)</div>																			

R-1 SHOPPING LIST - Item No.

84

UNCLASSIFIED

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2004
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604214N / AV-8B AIRCRAFT	PROJECT NUMBER AND NAME H0652 / AV-8B

C. PROGRAM CHANGE SUMMARY:

	FY 2003	FY 2004	FY 2005
Funding:			
Previous President's Budget:	16.063	10.527	12.365
Current BES/President's Budget	14.733	8.630	12.284
Total Adjustments	-1.330	-1.897	-0.081
Summary of Adjustments			
Congressional program reductions			
Congressional undistributed reductions			
Congressional rescissions		-0.097	
SBIR/STTR Transfer	-0.227		
Economic Assumptions			-0.073
Reprogrammings	-1.103		
Other Adjustments		-1.800	-0.008
Congressional increases			
Subtotal	-1.330	-1.897	-0.081

Schedule:

AVJMPS DT, OTRR, OT & IOC schedule moved to the right 1 QTR due to PMA-233 schedule slip in delivering the JMPS build 5. TAMMAC DT, OTRR, & IOC moved to the right 1QTR due to reliance on AVJMPS completion. H20: DT, OTRR & IOC moved to the right 1 QTR due to OSCAR OT delays. H2O OT moved to the right 2 QTRs due the the addition of requirements and the incorporation of Litening AT. TAMMAC OT moved to the right 2 QTR due to funding constraints.

Technical:

N/A

R-1 SHOPPING LIST - Item No. 84

UNCLASSIFIED

Exhibit R-2a, RD TEN Project Justification
(Exhibit R-2a, page 5 of 18)

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2004																						
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5		PROGRAM ELEMENT NUMBER AND NAME 0604214N / AV-8B AIRCRAFT			PROJECT NUMBER AND NAME H0652 / AV-8B																								
<p>D. OTHER PROGRAM FUNDING SUMMARY:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; border-bottom: 1px solid black;">Line Item No. & Name</th> <th style="text-align: center; border-bottom: 1px solid black;">FY 2003</th> <th style="text-align: center; border-bottom: 1px solid black;">FY 2004</th> <th style="text-align: center; border-bottom: 1px solid black;">FY 2005</th> <th style="text-align: center; border-bottom: 1px solid black;">FY 2006</th> <th style="text-align: center; border-bottom: 1px solid black;">FY 2007</th> <th style="text-align: center; border-bottom: 1px solid black;">FY 2008</th> <th style="text-align: center; border-bottom: 1px solid black;">FY 2009</th> <th style="text-align: center; border-bottom: 1px solid black;">To Complete</th> <th style="text-align: center; border-bottom: 1px solid black;">Total Cost</th> </tr> </thead> <tbody> <tr> <td style="padding-top: 10px;">APN BLI 051400, AV-8B Series Modifications</td> <td style="text-align: center; padding-top: 10px;">58.561</td> <td style="text-align: center; padding-top: 10px;">57.437</td> <td style="text-align: center; padding-top: 10px;">20.808</td> <td style="text-align: center; padding-top: 10px;">28.656</td> <td style="text-align: center; padding-top: 10px;">16.593</td> <td style="text-align: center; padding-top: 10px;">16.317</td> <td style="text-align: center; padding-top: 10px;">16.612</td> <td style="text-align: center; padding-top: 10px;">46.324</td> <td style="text-align: center; padding-top: 10px;">261.308</td> </tr> </tbody> </table> <p style="margin-top: 20px;">E. ACQUISITION STRATEGY:</p> <p>All efforts under Aircraft Handling provide investigations and analysis of testing and flight clearance authorization necessary to assess overall system capability and integration of projects. Funding for the Escape System will qualify an improved ejection seat design and will be placed on a cost type fee contract awarded to UPCO and HARCO. Funding for the Engine Life Management Program (ELMP) will be placed on a cost type contract to Rolls Royce to address safety of flight issues, top readiness degraders, engine removal and mission failure drivers in order to improve Fleet readiness and cost of ownership. It is also developed to assess life management program issues and design fixes for any service revealed deficiencies. NAWCWD, China Lake began integration of the AVJMPS program in FY01. Harrier 2.0 (H20) is a follow on to the OSCAR Operational Flight Program (OFP). OC1.2 to be simultaneously integrated into the aircraft with Litening (funded separately with APN-5, OSIP 23-00).</p>										Line Item No. & Name	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Complete	Total Cost	APN BLI 051400, AV-8B Series Modifications	58.561	57.437	20.808	28.656	16.593	16.317	16.612	46.324	261.308
Line Item No. & Name	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Complete	Total Cost																				
APN BLI 051400, AV-8B Series Modifications	58.561	57.437	20.808	28.656	16.593	16.317	16.612	46.324	261.308																				

R-1 SHOPPING LIST - Item No. 84

UNCLASSIFIED

UNCLASSIFIED

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)								DATE: February 2004				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-5			0604214N / AIRCRAFT			H0652 / AV-8B						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Primary Hardware Development	Various	Various	9.606								9.606	9.606
Primary Hdw Dev. - Ejection Seat	C/CPFF	Various	2.639								2.639	2.639
Primary Hdw Dev. - ELMP	C/CPFF	Rolls Royce	4.993	6.274	03/03	2.294	12/03	4.626	12/04	29.293	47.480	47.480
Primary Hdw Dev. - H20	C/CPFF	Ratheon / Boeing	5.603								5.603	5.603
Primary Hdw Dev. - Other	Various	Various	1,360.587								1,360.587	1,360.587
Systems Engineering	WX	NAWC-WD China Lake	26.442	0.787	02/03	4.435	11/03	4.663	11/04	8.682	45.009	
Systems Engineering	WX	NAWC-AD Pax	2.673			0.637	11/03	1.376	11/04	16.782	21.468	
Systems Engineering	WX	NAWC-AD NADEP	11.104								11.104	
Award Fees	C/CPAF	Various	0.838	0.060	12/02						0.898	0.898
Subtotal Product Development			1,424.485	7.121		7.366		10.665		54.757	1,504.394	
Remarks:												
Software Development - JMPS	WX	NAWC-WD China Lake	2.085	2.723	02/03						4.808	
Development Support												
Integrated Logistics Support												
Configuration Management												
Technical Data												
Studies & Analyses												
GFE												
Award Fees												
Subtotal Support			2.085	2.723		0.000		0.000		0.000	4.808	
Remarks:												

UNCLASSIFIED

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)										DATE: February 2004		
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5			PROGRAM ELEMENT 0604214N / AV-8B AIRCRAFT			PROJECT NUMBER AND NAME H0652 / AV-8B						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WX	NAWC-WD China Lake	33.950	1.033	07/03						34.983	
Operational Test & Evaluation	WX	NAWC-WD China Lake	19.458								19.458	
Subtotal T&E			53.408	1.033		0.000		0.000		0.000	54.441	
Remarks:												
Contractor Engineering Support	C/CPFF	NAWC-AD PAX	47.262	1.264	12/02	0.434	12/03	0.434	12/04	2.359	51.753	51.753
Government Engineering Support	WX	NAWC-AD Pax		2.242	12/02	0.689	10/03	1.071	10/04	13.434	17.436	
Travel	WX	NAWC-AD PAX	0.146	0.350	11/02	0.141	10/03	0.114	10/04	0.442	1.193	
											0.000	
Subtotal Management			47.408	3.856		1.264		1.619		16.235	70.382	
Remarks:												
Total Cost			1,527.386	14.733		8.630		12.284		70.992	1,634.025	
Remarks:												

CLASSIFICATION:

UNCLASSIFIED

EXHIBIT R4, Schedule Profile																								DATE: February 2004									
APPROPRIATION/BUDGET ACTIVITY												PROGRAM ELEMENT NUMBER AND NAME												PROJECT NUMBER AND NAME									
RDT&E, N / BA-5												0604214N / AV-8B AIRCRAFT												H0652 / AV-8B									
Fiscal Year	2002				2003				2004				2005				2006				2007				2008				2009				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
Acquisition Milestones																																	
System Development																																	
Engine Life Management Program Contract Award																																	
Software AVJMPs Delivery																																	
H20 Delivery																																	
TAMMAC S/W Delivery																																	
Test & Evaluation Milestones																																	
Development Test																																	
Operational Test																																	

R-1 SHOPPING LIST - Item No. 84

* Not required for Budget Activities 1, 2, 3, and 6

UNCLASSIFIED

Exhibit R-3, Project Cost Analysis

(Exhibit R-3, page 9 of 18)

UNCLASSIFIED

CLASSIFICATION:

[illegible]

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2004	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5		PROGRAM ELEMENT NUMBER AND NAME 0604214N / AV-8B AIRCRAFT			PROJECT NUMBER AND NAME H2634 / OSCAR			
COST (\$ in Millions)		FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost		2.979						
RDT&E Articles Qty								

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

(H2634) The program provides AV-8B Integration and Test of the following improvements, including: Open System Core Avionics Requirement (OSCAR), Joint Direct Attack Munition (JDAM), HAVEQUICK SINGARS, and Advanced Mission Computer (AMC). OSCAR is a form-fit-function replacement of the existing AV-8B mission and stores management computers that would capitalize on commercial-off-the-shelf hardware components and modular high order software language which will provide the necessary computer memory and throughput to integrate current modifications such as JDAM and HAVEQUICK/SINGARS. On 7 Oct 96 ASN (RD&A) directed the Program Manager to proceed immediately with the OSCAR initiative. On 4 Sep 98, Special Assistant to ASN(RDA) approved OSCAR program restructuring with capitalization on the Advanced Mission Computer (AMC). The title of the Operational Flight Program (OFP) software development effort which integrates the JDAM and HAVEQUICK/SINGARS into the AV-8B was changed from C2.0 to OC 1.2 to reflect the change of effort in accordance with the ASN (RDA) approved AV-8B OSCAR initiative. OSCAR completed first flight 29 May 1998. Successfully completed Iteration 4 and 5 flight testing and commenced Iteration 6 in first quarter FY01 for OC1.1. LRIP approval 2nd quarter of FY2002. Completed developmental testing of OC1.2 fourth quarter FY2002. OTRR approval fourth quarter FY2002. OPEVAL commenced 4th QTR FY02. Operational test was decertified 4th QTR FY02 to address software anomalies. Anomalies were corrected and OTRR recertification 1st QTR FY03. OPEVAL commenced 2nd QTR FY03. LRIP II approval received 3rd QTR FY03.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: February 2004	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604214N / AV-8B AIRCRAFT	PROJECT NUMBER AND NAME H2634 / OSCAR		
B. Accomplishments/Planned Program				
		FY 03	FY 04	FY 05
OSCAR		2.979		
RDT&E Articles Quantity				
<p>The Open Systems Core Avionics Requirements (OSCAR) initiative replacing the Mission Computer and Store Management System with Commerical components and continued devlopment of the common integrated Night Attack/Radar software to include integration of the 1000lb Joint Direct Attack Munitions (JDAM) weapon.</p>				

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2004																						
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5			PROGRAM ELEMENT NUMBER AND NAME 0604214N / AV-8B AIRCRAFT			PROJECT NUMBER AND NAME H2634 / OSCAR																							
<p>D. OTHER PROGRAM FUNDING SUMMARY:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; border-bottom: 1px solid black;">Line Item No. & Name</th> <th style="text-align: center; border-bottom: 1px solid black;">FY 2003</th> <th style="text-align: center; border-bottom: 1px solid black;">FY 2004</th> <th style="text-align: center; border-bottom: 1px solid black;">FY 2005</th> <th style="text-align: center; border-bottom: 1px solid black;">FY 2006</th> <th style="text-align: center; border-bottom: 1px solid black;">FY 2007</th> <th style="text-align: center; border-bottom: 1px solid black;">FY 2008</th> <th style="text-align: center; border-bottom: 1px solid black;">FY 2009</th> <th style="text-align: center; border-bottom: 1px solid black;">To Complete</th> <th style="text-align: center; border-bottom: 1px solid black;">Total Cost</th> </tr> </thead> <tbody> <tr> <td style="padding-top: 10px;">APN BLI 051400, AV-8B Series Modifications</td> <td style="text-align: center; padding-top: 10px;">58.561</td> <td style="text-align: center; padding-top: 10px;">57.437</td> <td style="text-align: center; padding-top: 10px;">20.808</td> <td style="text-align: center; padding-top: 10px;">28.656</td> <td style="text-align: center; padding-top: 10px;">16.593</td> <td style="text-align: center; padding-top: 10px;">16.317</td> <td style="text-align: center; padding-top: 10px;">16.612</td> <td style="text-align: center; padding-top: 10px;">46.324</td> <td style="text-align: center; padding-top: 10px;">261.308</td> </tr> </tbody> </table> <p style="margin-top: 20px;">E. ACQUISITION STRATEGY:</p> <p>PEO(A) ADM Ser DPEO(A)-ACQ2/015-97 dated 6 March 1997 approved the MSII acquisition strategy for OSCAR as an ACAT IVT program. OSCAR avionics CDR was held in January 1998 and completed first flight 29 May 1998. Using the NAWC-WD CPAF contract, funds will be used for basic design definition, drawing development, and OFP development and test. Twelve Mission System Computers and fourteen Warfare Management Computer engineering models have been procured for laboratory and flight test. The NAWC-WD/Boeing follow-on CPAF Contract was awarded on 16 December 1998. The period of performance will be for five years based on the need to complete Open System Core Avionics Requirement (OSCAR) and begin follow-on software block upgrade H2.0. As directed during 4 September 1998 program restructuring, an ACAT redesignation letter was approved changing the OSCAR program from an ACAT IVT program to an ACAT II program. The schedule was revised due to impact of AV-8B F402-RR-408 engine red stripe which resulted in a 5-month developmental test impact delay. Revised schedule has been approved and is currently being executed. OTRR approval fourth quarter FY2002. FRP moved to 2Q FY04. OPEVAL commenced 4th QTR FY02. Operational test was decertified 4th QTR FY02 to address software anomalies. Anomalies were corrected and OTRR recertification 1st QTR FY03. OPEVAL commenced 2nd QTR FY03. LRIP II approval received 3rd QTR FY03.</p>										Line Item No. & Name	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Complete	Total Cost	APN BLI 051400, AV-8B Series Modifications	58.561	57.437	20.808	28.656	16.593	16.317	16.612	46.324	261.308
Line Item No. & Name	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Complete	Total Cost																				
APN BLI 051400, AV-8B Series Modifications	58.561	57.437	20.808	28.656	16.593	16.317	16.612	46.324	261.308																				

R-1 SHOPPING LIST - Item No. 84

UNCLASSIFIED

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2004
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604214N / AV-8B AIRCRAFT	PROJECT NUMBER AND NAME H2634 / OSCAR

C. PROGRAM CHANGE SUMMARY:

	FY 2003	FY 2004	FY 2005
Funding:			
Previous President's Budget:	2.091	0.000	0.000
Current BES/President's Budget	2.979	0.000	0.000
Total Adjustments	0.888	0.000	0.000
Summary of Adjustments			
Congressional program reductions			
Congressional undistributed reductions			
Congressional rescissions			
SBIR/STTR Transfer	-0.018		
Economic Assumptions			
Reprogrammings	0.906		
Other Adjustments			
Congressional increases			
Subtotal	0.888	0.000	0.000

Schedule:

OTRR approval fourth quarter FY2002. OPEVAL commenced 4th QTR FY02. Operational test was decertified 4th QTR FY02 to address software anomalies. Anomalies were corrected and OTRR recertification 1st QTR FY03. OPEVAL commenced 2nd QTR FY03. LRIP II approval received 3rd QTR FY03. FRP moved to 2Q FY04.

Technical:

N/A

R-1 SHOPPING LIST - Item No. 84

Exhibit R-2a, RDTE Project Justification
(Exhibit R-2a, page 14 of 18)

UNCLASSIFIED

UNCLASSIFIED

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)								DATE: February 2004				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-5			0604214N / AV-8B AIRCRAFT			H2634 / OSCAR						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Primary Hardware Development	C/CPAF	Boeing St Louis	64.806								64.806	64.806
Primary Hardware Development	C/CPFF	DCMC, Draper Laboratory	0.285								0.285	0.285
Primary Hardware Development	C/FFP	DSC.KMX Norfolk	0.406								0.406	0.406
Systems Engineering	WX	NAWC-WD China Lake	40.893								40.893	
Systems Engineering	WX	NAWC-AD Pax River	3.015	0.224	10/02						3.239	
Systems Engineering	Various	PMA-209	3.518	0.930	02/03						4.448	
Award Fees	C/CPAF	Boeing St Louis	8.967								8.967	8.967
Subtotal Product Development			121.890	1.154		0.000		0.000		0.000	123.044	
Remarks:												
Development Support Equipment	Various	Various	0.284								0.284	
Integrated Logistics Support	Various	Various	0.323								0.323	
Configuration Management	Various	Various	0.143								0.143	
Subtotal Support			0.750	0.000		0.000		0.000		0.000	0.750	
Remarks:												

UNCLASSIFIED

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)								DATE: February 2004				
APPROPRIATION/BUDGET ACTIVITY RDTE, N / BA-5			PROGRAM ELEMENT 0604214N / AV-8B AIRCRAFT			PROJECT NUMBER AND NAME H2634 / OSCAR						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WX	NAWC-WD China Lake	14.553								14.553	
Operational Test & Evaluation	WX	NAWC-WD China Lake	3.001								3.001	
Operational Test & Evaluation	WX	COMOPTEVFOR, Norfolk	1.000	1.813	02/03						2.813	
Subtotal T&E			18.554	1.813		0.000		0.000		0.000	20.367	
Remarks:												
Contractor Engineering Support	C/CPFF	NAWC-AD Patuxent River	0.402								0.402	0.402
Travel	WX	NAWC-AD Patuxent River	0.019	0.012	07/03						0.031	
SBIR Assessment			0.165								0.165	
Subtotal Management			0.586	0.012		0.000		0.000		0.000	0.598	
Remarks:												
Total Cost			141.780	2.979		0.000		0.000		0.000	144.759	
Remarks:												

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R4, Schedule Profile																								DATE:											
APPROPRIATION/BUDGET ACTIVITY												PROGRAM ELEMENT NUMBER AND NAME												PROJECT NUMBER AND NAME											
RDT&E, N / BA-5												0604214N / AV-8B AIRCRAFT												H2634 / OSCAR											
Fiscal Year	2002				2003				2004				2005				2006				2007				2008				2009						
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4			
Acquisition Milestones																																			
Software OC1.2 Integration																																			
Test & Evaluation Milestones																																			
Development Test																																			
Operational Test																																			
Production Milestones																																			
LRIP																																			
FRP START																																			
DELIVERIES (ACFT -CUM)																																			

R-1 SHOPPING LIST - Item No.

84

* Not required for Budget Activities 1, 2, 3, and 6

UNCLASSIFIED

Exhibit R-3, Project Cost Analysis
(Exhibit R-3, page 17 of 18)

UNCLASSIFIED

CLASSIFICATION:

[illegible]

R-1 SHOPPING LIST - Item No.

84

UNCLASSIFIED

Exhibit R-3, Project Cost Analysis

(Exhibit R-3, page 18 of 18)